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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,848	04/13/2001	Gareth Geoffrey Hougham	Y0R920000548US1	8391

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Alvin J. Riddles  
Box 34, Candlewood Isle  
New FairField, CT 06812

EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
1775	396

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/834,848	HOUGHAM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John J. Zimmerman	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 January 2003 and 19 February 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 6-11 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 6-11, 16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## SECOND OFFICE ACTION

### *Response*

1. This Office Action is in response to the correspondence received from applicants on January 3, 2003 and February 19, 2003. Claims 6-11 and 16 are pending in this application.

### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 6-11 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). Independent claim 6 begins with the phrase "In the handling of spilled mercury through transfer from the spillage location". This language suggests that the claim is drawn to a process of handling spilled mercury through transfer from the spillage location. These claims are rejected because process claims must have actual process steps set forth in the claims.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6-11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 6-11 provide for the use of an absorber member, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

7. Proper Markush language is "from the group consisting of" instead of "from the group of" (e.g. see claim 9, line 2).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,164,606).

10. Jackson discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal to enhance capillary flow (e.g. see column 2, lines 12-22). Spirig discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal to enhance capillary flow (e.g. see claim 1). It is the examiner's position that an amount considered an excess of liquid solder constitutes spillage. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

11. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Spirig (U.S. Patent 4,416,408) or Kent (U.S. Patent 5,305,941).

12. Spirig discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal such as copper to enhance capillary flow (e.g. see claim 1). Kent discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal such as copper (e.g. see column 4, lines 49-60). It is the examiner's position that an amount considered an excess of liquid solder constitutes spillage. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Applicant's claims recite the intended use of the transfer tool to recover mercury (e.g. see claim 2). Spirig's and Kent's copper coated meshes, however, would be perfectly capable of such a function even though they are not specifically disclosed for such an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

13. Claims 6-8, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628).

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14. Yan discloses removing mercury from liquid using capillary tubes packed with gold coated zeolite particles (e.g. see Example 2; column 8, lines 45-66).

15. Claims 6-8, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Williston (U.S. Patent 3,232,033).

16. Williston discloses that spilled mercury becomes a hazard (e.g. column 1, lines 25-29) and uses a porous wool coated with gold to remove mercury from the environment (e.g. see column 2, lines 4-31).

17. Claims 6-9, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasenpusch (German Offenlegungsschrift 3729030 A1).

18. Hasenpusch discloses removing spilled mercury using mercury absorbent gold coated metal particles (e.g. see abstract and entire document for various materials).

19. Claims 6-7, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Seidenberger (U.S. Patent 4,076,553).

20. Seidenberger discloses contacting spilled mercury with a transfer tool comprising porous wool coated with zinc to remove mercury from the environment (e.g. see column 2, lines 4-14).

***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 6-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift 3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387).

23. Seidenberger discloses contacting spilled mercury with a wicking transfer tool comprising porous wool coated with zinc to remove mercury from the environment (e.g. see column 2, lines 4-14). Seidenberger differs from some claims in that Seidenberger uses cheaper zinc to coat his wick instead of gold. Hasenpusch, however, clearly discloses that it is well understood in the prior art that absorbers of spilled mercury can also be plated with gold in order to quickly form an amalgam with the mercury for good clean up (e.g. see abstract and entire article). In view of Hasenpusch, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use gold to coat the wicking transfer tool of Seidenberger because Hasenpusch clearly discloses that gold is also understood in the art to be a particularly good coating material for mercury spill clean up. Seidenberger may also differ from the claims in that Seidenberger's wicking transfer tool is a wool instead of a braid. Jackson (e.g. see Figure

2) and Spirig (e.g. see Figures 1-2), however, clearly show that one of ordinary skill in the art clearly understands that liquid metal can also be absorbed by wicking tools in the braided form. This is a fairly disclosed concept that anyone in the liquid metal absorbing art would be aware of and understand. In view of Jackson and Spirig, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a braided form for the wicking tool of Seidenberger because Jackson and Spirig clearly show that braided wicking tools are understood in the art to be particularly effective at absorbing liquid metal. As further evidence that one of ordinary skill in the art understands that the use of cloths and screens to wick is conventional, Gunter clearly shows this concept specifically applied to the wicking of mercury is understood (e.g. column 5, lines 24-31).

***Response to Arguments***

24. The following paragraphs are in response to the arguments received from applicants on January 3, 2003 and February 19, 2003

25. Regarding the rejection of claim 9 under 35 USC 112, second paragraph, the First Office Action stated that proper Markush language was needed in claim 9. Applicant did not address this rejection by either amendments to the claim or through arguments. Applicant should note that any further failure of applicant's responses to address all pending rejections in this prosecution may result in applicant's response being deemed nonresponsive. [Applicant has already received a prior Notice of Nonresponsive Amendment for failure to address all the issues in an Office Action – see correspondence mailed as Paper No. 4 on January 14, 2003.]

26. In addressing the rejection of the claims under 35 U.S.C. 101, applicant argues that what is being claimed is the structure of a transfer tool for transporting spilled mercury and that process or method terminology is not used in any of the claims. The examiner notes, however, that by beginning independent claim 6 with the phrase “In the handling of spilled mercury through transfer from the spillage location”, there clearly exists language suggesting that the claim is drawn to a process of handling spilled mercury through transfer from the spillage location. If applicant intends for the claim to be drawn to an article (e.g. a tool) and not a process, then applicant should redraft the claim to “A transfer tool for transporting spilled mercury from a spillage location”.

27. Regarding the rejection of claim 6 under 35 U.S.C. 102(b) as being anticipated by Jackson (U.S. Patent 3,715,797), Spirig (U.S. Patent 4,164,606), Spirig (U.S. Patent 4,416,408) or Kent (U.S. Patent 5,305,941), applicant argues that these references have been overcome since “all the claims have now been restricted to the handling of the spillage of mercury with a high surface area deformable substrate with a gold coating”. As was specifically noted in the Notice of Nonresponsive Amendment (see correspondence mailed as Paper No. 4 on January 14, 2003), claim 6 fails to contain these limitations and therefore no arguments commensurate with this independent claim were set forth by applicant in the two responses to the First Office Action. Even with the warning that applicant’s first response was considered a nonresponsive amendment in part for this reason, Applicant still did not address this issue in applicant’s second response.

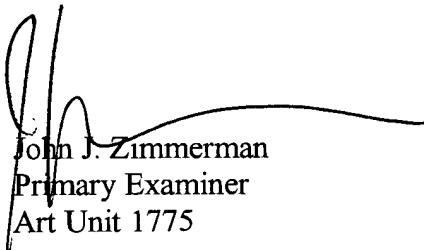
28. Regarding the rejections under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628), Williston (U.S. Patent 3,232,033), Hasenpusch (German Offenlegungsschrift 3729030 A1) and Seidenberger (U.S. Patent 4,076,553), applicant argues that the “art has directed much attention to getting mercury out of specific places but very little toward cleaning up spills”. The examiner clearly noted in the First Office Action that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). While it is noted that applicant's claim may recite the intended use of the transfer tool to recover mercury the applied prior art would be perfectly capable of such a function even though they are not specifically disclosed for such an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). All the applied references have the same structure as that required by the rejected claims and therefore the structures of the applied art are inherently capable of fulfilling the claimed intended use even if that is not the intent of the prior art.

29. Regarding the rejection of the claim under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift 3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387), applicant has not presented any rationale as to why this rejection is not proper. In the First Office Action, the examiner carefully discussed the motivation for combination of each of these references in the rejection and also showed the level of ordinary skill in the art as it was understood at the time the invention was made. No argument from applicant has been presented which specifically addresses the merits of this rejection or any specific error in the examiner's rationale for combination.

### *Conclusion*

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz  
April 10, 2003